Renal transplant complication: Ureteral obstruction

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65 yo male with a kidney transplant presented for nausea, abdominal pain, and decreased urine output. Physical exam revealed RLQ abdominal tenderness and a non-reducible right inguinal hernia. Abdominal/Pelvis CT showed obstruction of the right ureter within an inguinal hernia with hydronephrosis of the transplanted kidney (Images 1 and 2). Labs revealed acute renal failure (creatinine 9.32 mg/dl), hyperkalemia (6.0 mmol/l), and gap acidosis. Nephrology was consulted for emergent hemodialysis. General Surgery and Urology were consulted for the incarcerated ureter, obstruction, and hernia. Interventional Radiology placed a right percutaneous nephrostomy tube to relieve the renal obstruction (Image 3). After stabilization, he had an inguinal hernia repair with reduction of his transplant ureter.

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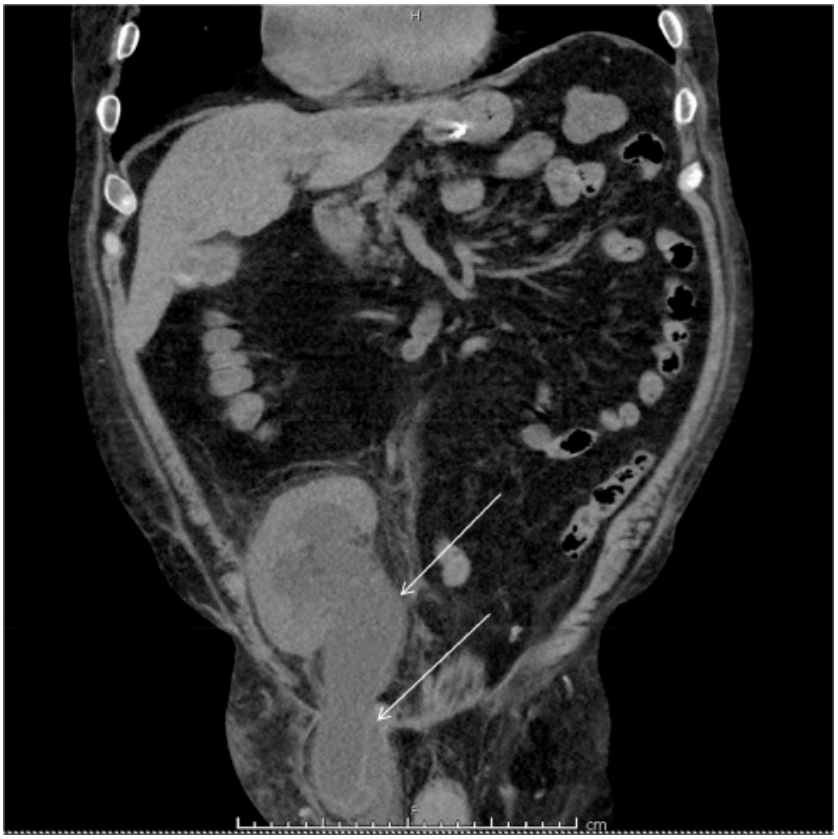

Image 1.

Non-Contrasted Abdominal and Pelvic CT scan (coronal plane) demonstrating obstruction of the right ureter of the transplanted kidney within a right inguinal hernia with resulting hydronephrosis and perinephric stranding (arrows)

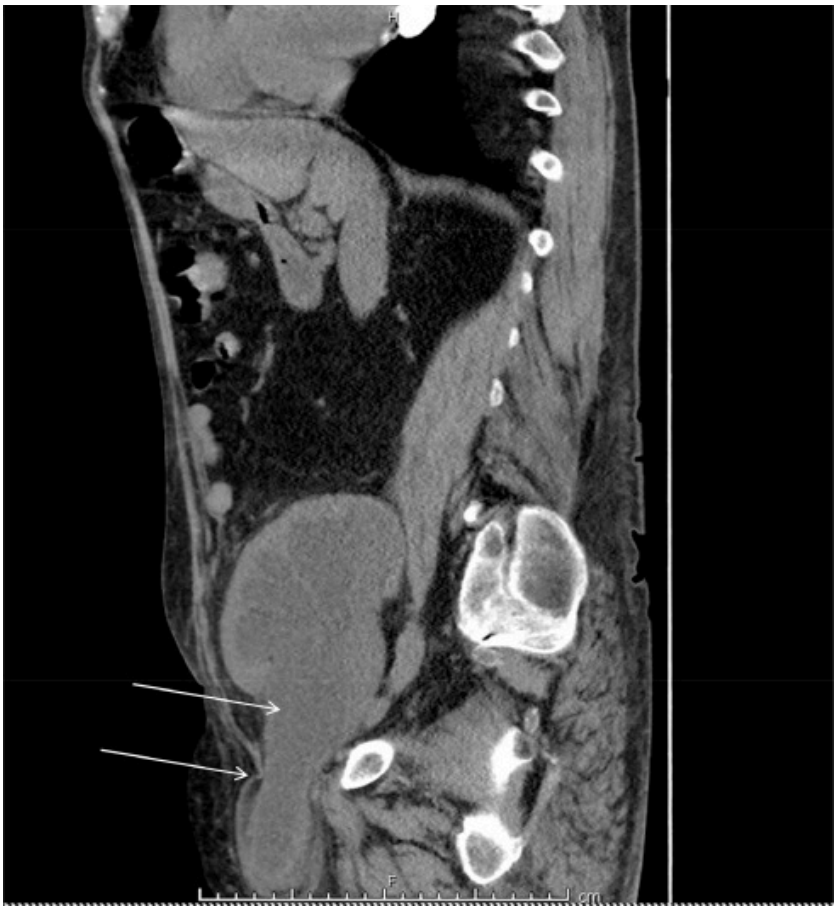

Image 2.

Non-contrast Abdominal and Pelvic CT scan (sagittal plane) demonstrating obstruction of the right ureter of the transplanted kidney within a right inguinal hernia with resulting hydronephrosis and perinephric stranding (arrows).

Image 3.

Nephrostogram Antegrade: Under fluoroscopic guidance, contrast was introduced thru the indwelling transplant percutaneous nephrostomy catheter. The image shows the nephrostomy catheter in the dilated transplant renal pelvis with marked dilatation of the calyces, pelvis, and ureter up to the level of the inguinal herniation (arrow 1). The mid ureter is inside the hernia (arrow 2) where a small amount of contrast is noted distally. There is no filling of the urinary bladder.